ABSTRACT

BACKGROUND: During laparoscopic surgeries due to pneumoperitoneium atelectasis and ventilation perfusion mismatch are common leading to gas exchange impairment, alterations in acid base balance and cardiorespiratory physiology. Alveolar recruitment and PEEP are helpful in treatment of hypoxemia due to atelectasis But high airway pressure and PEEP may cause barotrauma during pneumoperitoneium. So to avoid the additional increase in inspiratory airway pressure during pneumoperitoneum, ARS plus PEEP can be applied before carbon dioxide gas insufflation, with no PEEP thereafter.

AIMS & OBJECTIVES : To examine the effect of a pre-emptive alveolar recruitment strategy on arterial oxygenation during subsequent pneumoperitoneum..

METHODOLOGY : 50 patients between the ages of 20 to 60 undergoing general anaesthesia were included in the study.

Routine GA Given. After intubation, 50 patients were randomly allocated to receive either tidal volume 10 ml/kg with no positive end-expiratory pressure (group C) or alveolar recruitment strategy of 10 manual breaths with peak inspiratory pressure of 40 cmH2O plus positive end-expiratory pressure of 15 cmH2O before gas insufflation (group P). During pneumoperitoneum, group P was ventilated with the same setting as group C

RESULTS: PaO2 measured during peumoperitoneum was higher in group P than in group C .We conclude that the alveolar recruitment strategy we applied before insufflation of the peritoneal cavity may improve oxygenation during laparoscopic surgeries

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CONCLUSION: In conclusion, pre-emptive ARS before gas insufflation may be useful in improving arterial oxygenation without additional increase in airway pressure in laparoscopic surgery

KEYWORDS: alveolar recruitment strategy, before pneumoperitoneum, improves oxygenation